15

functional modules shown separately in FIG. 11 could be implemented in a single module and the various functions of single functional blocks could be implemented by one or more functional blocks in various implementations. The actual number of modules and the division of particular 5 functions and how features are allocated among them will vary from one implementation to another and, in some implementations, depends in part on the particular combination of hardware, software, or firmware chosen for a particular implementation.

The use of "adapted to" or "configured to" herein is meant as open and inclusive language that does not foreclose devices adapted to or configured to perform additional tasks or steps. Additionally, the use of "based on" is meant to be open and inclusive, in that a process, step, calculation, or 15 other action "based on" one or more recited conditions or values may, in practice, be based on additional conditions or value beyond those recited. Headings, lists, and numbering included herein are for ease of explanation only and are not meant to be limiting.

It will also be understood that, although the terms "first," "second," etc. may be used herein to describe various elements, these elements should not be limited by these terms. These terms are only used to distinguish one element from another. For example, a first node could be termed a 25 second node, and, similarly, a second node could be termed a first node, which changing the meaning of the description, so long as all occurrences of the "first node" are renamed consistently and all occurrences of the "second node" are renamed consistently. The first node and the second node are 30 both nodes, but they are not the same node.

The terminology used herein is for the purpose of describing particular implementations only and is not intended to be limiting of the claims. As used in the description of the implementations and the appended claims, the singular 35 forms "a," "an," and "the" are intended to include the plural forms as well, unless the context clearly indicates otherwise. It will also be understood that the term "or" as used herein refers to and encompasses any and all possible combinations of one or more of the associated listed items. It will be 40 further understood that the terms "comprises" or "comprising," when used in this specification, specify the presence of stated features, integers, steps, operations, elements, or components, but do not preclude the presence or addition of one or more other features, integers, steps, operations, 45 a linear motive force along a single axis. elements, components, or groups thereof.

As used herein, the term "if" may be construed to mean "when" or "upon" or "in response to determining" or "in accordance with a determination" or "in response to detecting," that a stated condition precedent is true, depending on 50 the context. Similarly, the phrase "if it is determined [that a stated condition precedent is true]" or "if [a stated condition precedent is true]" or "when [a stated condition precedent is true]" may be construed to mean "upon determining" or "in response to determining" or "in accordance with a determi- 55 nation" or "upon detecting" or "in response to detecting" that the stated condition precedent is true, depending on the context.

The foregoing description and summary of the invention are to be understood as being in every respect illustrative and 60 exemplary, but not restrictive, and the scope of the invention disclosed herein is not to be determined only from the detailed description of illustrative implementations but according to the full breadth permitted by patent laws. It is to be understood that the implementations shown and described herein are only illustrative of the principles of the present invention and that various modification may be

16

implemented by those skilled in the art without departing from the scope and spirit of the invention.

What is claimed is:

- 1. A method comprising:
- at an electronic device with a display, a sensor, and an actuator coupled to the display:
 - detecting movement of the electronic device using the sensor while presenting content on the display;
 - determining an inter-frame movement of the electronic device based on the movement of the electronic device; and
 - moving the display using the actuator in synchrony with a duty cycle of the display such that the display is moved:
 - in a first direction such that movement of the display opposes the inter-frame movement of the electronic device while activated pixels of the display are illuminated; and
 - in a second direction, opposite the first direction, while the activated pixels are not illuminated.
- 2. The method of claim 1, wherein determining the inter-frame movement comprises determining a translation vector defining the inter-frame movement.
- 3. The method of claim 2, wherein moving the display is based on the translation vector.
- 4. The method of claim 1, wherein the actuator produces an oscillatory motive force along a single axis.
- 5. The method of claim 4, wherein the oscillatory force moves the display in the first direction along the single axis while the display is emitting light and the second, opposite direction along the single axis while the display is not emitting light.
- 6. The method of claim 4, wherein the oscillatory motive force has an amplitude element corresponding to a velocity associated with the movement of the electronic device and an orientation element that relates to a direction associated with the movement of the electronic device.
- 7. The method of claim 1, wherein the actuator is a first actuator, and wherein moving the display comprises:
 - imparting a first motive force along a first axis with the first actuator; and
 - imparting a second motive force along a second axis that is orthogonal to the first axis with a second actuator.
- 8. The method of claim 1, wherein the actuator produces
- 9. The method of claim 1, further comprising:
- synchronizing the duty cycle of the display with the movement of the display to increase a likelihood that the display emits light when the display is linearly accelerating.
- 10. The method of claim 1, wherein the sensor is an inertial measurement unit configured to provide inertial data associated with the movement of the electronic device.
 - 11. The method of claim 1, wherein the sensor is:
 - an image sensor disposed on an outward facing surface of the electronic device that is configured to generate image data depicting a proximate environment of the electronic device; or
 - an image sensor disposed on an inward facing surface of the electronic device that is configured to generate image data depicting a user of the electronic device.
 - 12. An electronic device comprising:
 - a display;
 - a processor configured to determine a translation vector using data corresponding to movement of the electronic device, the translation vector defining inter-frame movement of a pixel of the display; and